

## **Front Porch Broadcast Call: Supporting Quality Teaching and Learning: A Conversation About Professional Development**

Micki Ostrosky: Hi, everybody. Welcome to NCQTL's Front Porch Series. This is Micki Ostrosky from the University of Illinois, a collaborator on the National Center for Quality Teaching and Learning. Thank you for joining us for one of our monthly webinars where you get to hear from leading experts in the field who share some of their knowledge and expertise and talk about how to then apply this to Head Start classrooms, Head Start programs.

Let me introduce our speaker then, and then we'll get started. So, Pat Snyder is a professor, the David Lawrence Jr. endowed chair in early childhood studies, and the founding director of the Anita Zucker Center for Excellence in Early Childhood Studies at the University of Florida. Over the past 10 years, Pat's been engaged in ongoing lines of research focused on the impact of professional development on teachers' and caregivers' implementation of quality teaching and learning. Her work has included investigations of the impact of various practice-based coaching formats. Pat's a former editor of the Journal of Early Intervention, which is one of the leading research journals in early childhood special ed. She's worked on both the Head Start Center for Inclusion and on NCQTL. Through her teaching, research, and service activities, Pat has engaged in ongoing collaborations with Head Start and other early childhood programs to support practitioners' implementation of quality teaching and learning practices. We're thrilled to have you as our Front Porch Series speaker today, Pat, so I'll turn the mic over to you.

Pat Snyder: Okay. Well, thank you for the introduction, Micki, and welcome, everyone. I'm so very pleased to be with all of you today and to be able to have some discussion about professional development and how it can support quality teaching and learning. So let's just get started.

During the Front Porch Series today, I would like to take some time to describe briefly how we've been thinking about professional development in relationship to supporting quality interactional and teaching practices and in turn how quality interactional and teaching practices support children's learning and the achievement of school readiness outcomes in the context of Head Start. I'd also like to define professional development together with you this afternoon and analyze a framework that we've been using to help those engaged in professional development within Head Start align their desired professional development outcomes with the professional development strategies that they're using.

And then finally, as Micki mentioned, I'd like to share some research that has and is helping us learn about effective features of professional development, both in Head Start and in other early learning contexts. Professional development, as many of you know, has been identified as an important competency driver to support practitioners' implementation of quality teaching and learning practices and to improve children's developmental and learning outcomes.

Against this backdrop, the need to really advance the scientific basis for our professional development approaches in early childhood has been widely recognized. So what do we mean when we say that professional development is a competency driver? From our perspective, much like a navigation system, professional development should provide a road map toward our desired destinations of quality interactional and teaching practices and improved child development and learning outcomes.

So let's take a brief look at the important quality relationships among the professional development competency driver and those desired destinations of quality interactional and teaching practices and improved child development and learning outcomes that have been informed by our research. This figure shows that to reach our desired destinations of quality teaching and quality learning, quality professional development is critical. By quality professional development, we mean the use of research-based strategies to support adult learning and to foster practitioner confidence and competence to implement quality interactional and teaching practices.

High-quality professional development leads to teachers and other caregivers using effective curricula and research-based interactional and teaching practices as intended. In turn, when teachers and staff use effective curricula and teaching practices as intended, all children learn important skills and school readiness outcomes are more likely to be achieved. And we refer to this, in shorthand, as quality learning. If we want to reach our final destination, which is this destination, that all children are learning important skills and achieving school readiness outcomes, then we have to make these quality connections all along the route, beginning with, or perhaps ending with, as we'll talk about later in the presentation, with professional development, quality professional development.

But for professional development to be a competency driver and for its navigation system to function properly, we have to have a clear understanding of what will emerge when we enter the term "professional development" into our navigation system. And we need a research-informed framework that can guide our professional development decisions and efforts along the way. As most of you know, professional development comes in many forms, and it's been defined in a number of different ways. And in fact, one of the challenges we face is that there really is no agreed upon definition for what we mean when we say early childhood professional development.

And even more importantly, we don't have consensus across various types of early childhood programs such as Head Start, Early Care and Education, pre-K programs, early intervention, early childhood special education, about what we mean when we say professional development. An agreed upon definition for early childhood professional development that can be used consistently across programs is important to promote coherent and aligned professional development systems across programs where practitioners are often interacting with each other for the benefit of children and families.

It's important to have a definition that encompasses many different forms and formats of professional development, that bridges the traditional divide between pre-service training and in-service training, and that recognizes the importance of professional development as an important competency driver for quality teaching and quality learning. One definition of professional development that we have adopted as part of our NCQTL work comes from the National Professional Development Center on Inclusion, or NPDCI. NPDCI defined professional development as "facilitated teaching and learning experiences that are transactional and that are designed to support the acquisition, skills, and dispositions -- of knowledge, skills, and dispositions and the application in practice."

And as you can see, this definition, because it's very general, encompasses many different forms and types of professional development by its emphasis on facilitated teaching and learning experiences. It doesn't separate pre-service and in-service training, but rather it emphasizes facilitated teaching and learning experiences that are transactional. And it highlights both the acquisition of knowledge, skills, and dispositions as well as applications in practice. In addition to the definition, NPDCI also developed a framework for thinking about the who, what, and how of professional development and the necessary infrastructure and contextual supports for ECPD.

Next, I would want, I want to share how we've adopted and adapted slightly the NPDCI framework by adding a "why" component, and I want to share a figure that was first introduced by Jeanette McCollum and Camille Catlett in 1977 to illustrate the ways we are aligning the why and the how of professional development in the context of Head Start. The adapted NPDCI framework poses four questions to consider when we're planning, implementing, and evaluating quality professional development. The first is who is the focus of the professional development? This helps us identify for whom the professional development is intended.

The second question is why are we doing the professional development? What outcomes do we want for the learner? Do we want learners to become aware of a practice or know about a practice? Do we want learners to demonstrate an instructional or interactional practice? Or do we want learners to use interactional and teaching practices in their practice contexts as intended? Sometimes, as you're probably thinking, we want all three things. But it's very important to clarify why we're doing the professional development.

The third question is what is the content focus of the professional development? For example, are we focused on emotional support practices, literacy teaching practices, science teaching practices, social-emotional teaching practices? Having a content focus in professional development has been shown through research to be a very important ingredient of quality professional development. When we refer to interactional or teaching practices in professional development, we mean specific statements of the actions or behaviors of practitioners that support child learning.

And using this definition helps plan targeted professional development. For example, developing ways to embed story problems in snack, in centers, and during book reading is an example of a math teaching practice. Displaying positive affect with children by such actions as laughing and smiling is an example of an interactional practice focused on creating a positive classroom climate. Identifying the focus of the content, the content focus of the professional development, and the associated practices related to that content area are very important.

The fourth question focuses on how the professional development will be delivered, and these are the facilitated teaching and learning experiences that are used as part of the professional development experiences. And they encompass both structural and process features that learners will experience.

This is the adapted McCollum and Catlett slide that I mentioned earlier, and it shows the "why" of professional development on the Y-axis. That is, we might be providing professional development because we want practitioners to become aware of or know about a practice. For example, knowing about embedding math story problems in everyday activities and why this is important for children's learning. Or we might want practitioners to demonstrate that they can use positive affect with children.

Finally, we might want practitioners to use these two practices or other practices in their practice contexts. On the X-axis of this figure is a continuum of learner synthesis and application that's required for each of the House strategies I'm now going to show you in the figure. If we look at the Y-and X-axes together, we can explore the various strategies that might be used in professional development based on our desired outcomes. The placement of these strategies within the figure is based on decades of professional development research that aligns strategies with achievement of desired professional development outcomes.

For example, if we want a learner to experience facilitated teaching and learning about embedding math story problems in everyday activities and our desired outcome is that the learner will become aware of this practice or gain knowledge about the practice, at the lowest level of learner synthesis and application, we might provide a short lecture through an in-service suite about the practice with an accompanying handout.

On the other hand, if we want the practitioner to be able to demonstrate how they would embed math story problems in everyday activities, we might model for them how to do this either on video or face to face at the lowest level of learner synthesis or application or, at a higher level of learner synthesis and application, we might have them role play this practice during a workshop series on effective math teaching practices and provide feedback for them about their practice implementation.

Finally, if we want the learners to use these practices in context, we need to provide them with job aids at the lowest level of learner synthesis and application. This might include giving teachers prompt cards to post near everyday activity areas that remind them to embed math story problems in the activities.

Or, at the highest level of learner synthesis and application, we might provide coaching to support a teacher's implementation of not only how to teach math story problems during everyday activities but how to implement other effective teaching practices for a math curriculum, such as Building Blocks.

Now I'm going to superimpose onto the diagram a few concrete examples of "how" strategies that could be used in relation to the professional development strategies that I've just described. For example, teachers reviewing an online presentation about effective literacy practices is a low-complexity awareness and knowledge strategy, whereas home visitors writing back-home plans for their early literate -- to support their implementation of their early literacy practices would be a medium-level use-focused strategy. As we've shared this diagram and the associated concepts and research with Head Start practitioners and leaders through our work in NCQTL, those providing professional development have commented on the usefulness of this figure as they approach the development, the implementation, and the evaluation of their training and technical assistance plans, or as they work with practitioners to develop their professional development plans in the context of the Head Start programs in which they work.

This is particularly important as we all are trying to rethink our approaches to professional development in relationship to both our desired outcomes from the professional development as well as in relationship to moving the dial on quality teaching and learning practices and child development and learning outcomes. This slide illustrates concretely how the adapted NPDCI framework that incorporates the who, why, what, and how of professional development and the figure we just reviewed were used to revise a T and TA plan by a Head Start grantee.

In this example, to ensure teaching staff know and use teaching practices that support children's positive relationships with adults and peers, the grantee is planning to use the NCQTL Fostering Connections in-service suite. This House strategy is likely to lead to a knowledge outcome. In addition, to support a demonstration outcome, the professional development will include online video examples from CSEFEL modules of teachers and families using those effective emotional support teaching practices.

And finally, this grantee made the decision that to support the use of emotional support teaching practices in classrooms and homes, the grantee plans to implement practice-based coaching for teachers and families who identify the need for additional support to implement the practices as intended. So now that we've considered a contemporary definition for professional development and hopefully at least gained some awareness about a framework and a figure that was informed by some research to align desired professional outcomes with effective professional development strategies, let's turn our attention to what is known and what we're learning from research about effective features of professional development, particularly professional development that's designed to improve quality teaching and learning practices, what we might call quality teaching, and child development and learning, or what we might call quality learning.

All of us are aware of a significant body of research that's identified features of professional development that are not effective for improving teaching and learning practices for child development and learning. From this research, and also from the collective experiences and wisdom of many of you

who have provided professional development for a number of years, a number of criticisms have been leveled at traditional approaches to professional development. These include such things as limited access, about when professional development is offered, either at times or locations, or in locations that are not convenient or useful for practitioners. We've also heard criticisms related to the fragmented teaching and learning experiences that aren't connected to day-to-day practices that practitioners are using and need to use in their classrooms to support high-quality instruction and child learning.

Oftentimes traditional professional development is criticized as being too theoretical and not having explicit connections to practice. Another criticism often leveled at traditional professional development is there are limited opportunities in one-shot workshops or brief trainings for people to actually practice implementing practices and gaining feedback about their practice implementation. And often our facilitated teaching and learning experiences are too didactic and not transactional, as we might say in the webinar today, for example.

In addition, teaching and learning strategies are not aligned often with desired outcomes. That is, those providing professional development often aren't considering the figure and framework that we just reviewed. And the transmission of information often is from experts to practitioners without considering the learner's history, their preferences, their experiences, and their existing competence and confidence.

Finally, professional development often has been characterized as relying on a "train and hope" or a "spray and pray" mentality. That is, we train and hope or spray and pray that practitioners are able to glean information from a workshop and apply that information directly into their practice context. Episodic and fragmented approaches to professional development have also been described as sit and "git." That is, sit and listen for a while and then get, without any systematic plan or support for implementation of practice in context. The point is that what we've learned from the research and from all of these criticisms of professional development is that poorly designed and implemented professional development doesn't lead to the quality interactional and teaching practices and the desired child outcomes that we so very much want to see in all of our programs.

So, what are the features of quality and research-informed professional development? The literature on effective professional development is growing exponentially. Recently there have been a number of rigorous experimental examinations of professional development that have been conducted, and more are ongoing. For example, a review of the professional development literature that we conducted from 1970 to 2011 showed that the number of published studies that met our inclusion criteria focused on early childhood professional development from 1970 to 1986, which is 16 years, 16-year period, there were 16 studies. And from 1986 through 2011, which is a 25-year period, there were 240 studies.

In addition, we found that 27 randomized group experimental design studies were conducted between 2006 and 2011 versus none before 1991. As the body of empirical literature grows, we and others who are studying professional development have been able to make several research-informed statements about promising or effective features of professional development. On this slide, I've organized these features according to structural and process features. In brief, with respect to structure, we know that it is important to consider the form of professional development in relation to the desired professional development outcome, as we just talked about previously. So is a workshop designed to build knowledge, is a workshop designed to build knowledge and also to be able to demonstrate use of the practice, or is a workshop designed to both -- for the learner to gain knowledge, to be able to demonstrate use of the practice, and to actually use the practice in context?

Again, very important to consider the structural form of the PD and its relation to the desired professional development outcome. We also know that structural features are important to consider -- other structural features are important to consider. And similar to structural features in early learning environments, there are structural features of professional development that are important to think about. These include the professional development environment, including the materials and the arrangements of the professional development experience.

Research suggests the importance of materials that illustrate what quality interactional and teaching practices look like, and, as I mentioned earlier, the presence of materials or job aids that support practice implementation in context. How we arrange the professional development environment for learning is also important. For example, having participants sit passively in rows is unlikely to set the occasion for transactional teaching and learning experiences.

In addition to environmental quality, we also need to consider the temporal features of professional development. This includes things such as the dose of the professional development and its duration as well as the sequencing and the pacing of the professional development. We know that PD that is likely to result in using practices as intended is characterized by being sustained rather than episodic and that pacing is very important to provide opportunities for learners to engage in recursive cycles of learning about a practice, seeing it in action, trying it out in the practice context, and receiving feedback about implementation.

It also is important to consider the structure of the social features of professional development. Again, from research, we are learning that collective participation in some types of professional development -- for example, teacher learning communities -- combined with opportunities for individualized guided practice with feedback, is important for using practices as intended.

Well, if we move over to the process side, as noted previously, we've learned from research that it is important to have an explicit content and practice focus in professional development, particularly when the professional development is focused on supporting implementation of quality teaching and learning practices.

It's also important for the professional development to have coherence. This means it has to incorporate the experiences consistent with the learner's goals, it needs to build on previous knowledge and skills, and it needs to provide facilitated teaching and learning opportunities for learners to discuss their experiences with others. Professional development is most likely to be effective in supporting quality interactional and teaching practices when the content is aligned with the curricula, the assessment, the interactional and teaching, and the accountability practices that are relevant to Head Start, and when the professional development considers an integrated approach to learning, helping to facilitate and scaffold connections between what has been previously learned and practiced and the current focus of the professional development.

Finally, we know from research that active facilitated teaching and learning strategies, particularly those that model the practices or provide opportunities for practice in either analog situations that mirror real life or, ideally, in real-life situations are most likely to result in implementing quality interactional and teaching practices as intended.

Over the past two years -- 10 years. Two years -- I wish it was two years. Over the past 10 years, as Micki mentioned, the focus of our professional development research has been to consider these and other active ingredients of effective professional development and particularly to explore the impacts of coaching on teachers' implementation of research-informed interactional and teaching practices. We've characterized coaching in our work as a bridge that connects what might be learned in workshops, courses, or through other forms of professional development and applying what has been learned in practice.

In this illustration, you'll note that these two bridges look very different, to emphasize that coaching might also take different forms. It might be expert coaching; it might be peer coaching; it might be self-coaching; it might be teacher learning communities. But it serves a similar function. Regardless of the form it takes, we're learning from research some of the key features or components of effective coaching models. So you might be asking, why is there such an interest in using coaching as a high-intensity strategy, given the resource-intensive nature of coaching, to support the implementation of quality teaching and learning practices? And this slide is from a meta-analysis or research synthesis across different studies that was conducted by Joyce and Showers in 2002.

This focus was primarily on K-12 education, however. But Joyce and Showers used the studies that were included in their review to estimate the likely impacts on knowledge, skill demonstration, and use when different types of PD strategies were used. And so as the slide shows, when theory and discussion alone were used in a workshop, Joyce and Showers estimated from the research that they reviewed that about 10 percent of participants would gain knowledge as a function of only having theory and discussion present in the professional development experience, and that 5 percent of the participants would be able to demonstrate a skill, but no participants would be able to use or transfer the knowledge or skill for use in the classroom.



When Joyce and Showers looked at studies that involved professional development that had theory and discussion but also provided opportunities for demonstration of the practice in training, you can see the increases in the estimated percentages of participants who would know, demonstrate, or use in the classroom. As you can see, the percentage estimates are highest for knowledge, skill, and use in the classroom when the PD involved theory and discussion, plus demonstration in the training, plus practice and feedback in the training, plus coaching in the classroom.

This means that if use in context is a desired professional development outcome, workshops alone are likely not going to be enough. Studies over and over have replicated this finding, and research we have conducted related to the pyramid model, embedded instruction for early learning, and other PD research, including research on my teaching partner conducted by our colleagues at UVA, has shown that the use of these components together has been associated with teachers' increased use of practices in classrooms, and in some studies, improvements in child development and learning outcomes. This is the practice-based coaching framework we developed in our research and that has been developed and disseminated further through NCQTL. As you can see, it has several important components that are based on research about promising features of coaching models that are likely to support implementation of quality interactional and teaching practices.

First, coaching occurs in the context of a collaborative coaching partnership. This relates to the collective participation feature I mentioned earlier about effective professional development. Second, effective teaching practices are at the core of the PBC model, meaning the coaching is focused on supporting implementation of known and clearly specified teaching practices, that content focus that I mentioned earlier. Third, the coaching involves cycles of needs assessments related to a practice or set of practices, developing goals and action plans to support practice implementation, having the opportunity for focused observation of practitioners implementing the practices in real-world contexts, and opportunities for the practitioner to engage in reflection and to receive feedback about practice implementation.

There are a number of documents on ECLKC that further describe practice-based coaching, the forms of practice-based coaching, each of the practice-based coaching components, and information about what we know and are learning about PBC as a form of professional development. I want to quickly share a couple of examples from some of our research that's been going on over the past 10 years just to briefly illustrate the points that I just made.

So here's a slide from one of our early pyramid model studies that shows the impact of professional development, including practice-based coaching, on preschool teachers' implementation of pyramid model practices as measured by the teaching pyramid observation tool. In this study, teachers in the blue group received about 20 hours of high-quality and cohesive workshops, they received job aids such as implementation guides and materials, and they received between 7 and 17 coaching sessions provided by a trained coach.

Teachers in the red received professional development being provided in their program, what we refer to as business-as-usual professional development. Teachers in this study were randomly assigned to conditions, and at the end of this study, teachers in the business-as-usual condition received the professional development workshops and the implementation guides and materials. But what this figure shows is the outcomes during the primary study year, and as shown in this figure, the combination of professional development strategies, including practice-based coaching, led to significant increases in the teachers', experimental teachers' use of pyramid model practices in their classroom over time and also noteworthy differences between the teachers who were assigned to the business-as-usual condition.

This slide is from another study that we conducted, and it was focused on embedded instruction for early learning. And as you might know from a previous Front Porch broadcast, embedded instruction focuses on providing instruction to young children with disabilities during ongoing activities and routines. In this study, similar to the pyramid study, different groups of teachers were randomly assigned to participate in one of three types of professional development. The blue group of teachers received about 17 hours of high-quality workshops, implementation guides and materials, and on-site coaching for 16 weeks.

The red group, the second group of teachers, received the same workshops, guides, and materials, but instead of on-site coaching, they received self-coaching, access to a self-coaching website for 16 weeks. And the third group of teachers, the green group, received business-as-usual professional development. On the left-side figure, we see the impacts of professional development on teachers' ability to write quality learning targets. That is, what they wanted to teach children, what we might call their instructional objectives. As you can see, teachers who received either form of coaching wrote higher quality learning targets over time as measured by the percent of quality indicators that were present in their learning targets relative to the teachers who were in the business-as-usual condition.

Teachers who received on-site or self-coaching were able to increase their ability to demonstrate the skill of writing instructional targets. But when we look at the right-hand figure, which focuses on teachers' implementation of embedded instruction learning trials in their classrooms, teachers who received on-site coaching increased their implementation of embedded learning trials in the classroom context and had noteworthy differences from the other two groups of teachers.

Teachers in the self-coaching condition did not show such significant increases. This study helped us understand that more research was needed to understand which forms of PD might be needed under what conditions to support the implementation of particular teaching practices. In addition to the two studies I just briefly described, we recently examined 32 randomized experimental design studies published between 2006 and 2012 that met the inclusion criteria that are specified on this slide.

We analyzed the features of the studies using the who, what, why, and how NPDCI framework previously described. So in the interest of time, I'm just going to briefly summarize the findings. Of note, 22 of the 32 studies were conducted in Head Start settings. The content focus across all studies ranged from literacy practices, which was a focus in 22 studies, to several studies focused on classroom environmental quality. We did a comprehensive analysis of the active ingredients of the professional development intervention and the types of outcomes, whether those were improved teaching or interactional practices or child outcomes that were examined.

In brief, as shown on the slide, these were the two features of the professional development interventions that were implemented that were common across all the reviewed studies. First, the provision of detailed, concrete, and specific information about practices with explicit descriptions and demonstrations of those practices. And second, sustained and individualized support and feedback in job-embedded settings.

In 14 studies, this job-embedded support was referred to as coaching, in nine studies, it was referred to as mentoring, and in nine other studies, it was referred to as consultation. And with respect to the outcomes, 14 of the 32 studies examined whether the professional development intervention was associated with changes in classroom quality, 25 of the 32 studies examined whether the professional development intervention was associated with changes in teachers' implementation of interactional or teaching practices.

Findings for both environmental quality as well as interactional or teaching practices generally showed modest to significant changes in classroom quality or teachers' implementation of practices following participation in the professional development intervention relative to teachers who did not participate in the PD intervention. And for studies that compared sustained and individualized implementation support in relation to changes in child outcomes, those were measured in 7 -- 17 of the 32 studies. And across the reviewed studies, most showed low to moderate relationships between the professional development intervention and the child outcomes.

So, I know it's been a whirlwind, but pause for a second to say here are at least three take-home messages I hope you'll take home from today's webinar. I hope you also will identify other take-home messages that will be useful for you in your work. And I hope you'll take a few minutes, either as we've gone through the webinar today or after the webinar briefly, to jot down a few follow-up actions from today's webinar for yourself after it ends. As we've said earlier, this would be a promising practice in relation to following up to the presentation and discussion, which has been primarily very didactic.

So in summary, here again is the Making Quality Connections slide, and this time it's using the NCQTL images. So on the far left, we see our competency drivers, which are different forms of quality professional development that are aligned with our desired PD outcomes. And the quality professional development leads to use of effective teaching practices as represented in the House framework.

And finally, quality teaching and the use of effective interactional and teaching practices leads to quality child learning and achievement of school readiness outcomes as reflected in the Head Start Child Outcomes framework. As shown in this figure, however, we can also map backwards, and in fact, we would suggest the importance of mapping backwards from child learning outcomes to professional development.

That means regular review of child outcome data can help us map backwards to identify which interactional or teaching practices should be the focus for quality professional development. Finally, I want to acknowledge and thank my colleagues on the NCQTL coaching team for their important contributions and collaborations, and like to thank you for taking part in today's Front Porch Series, and happy navigating as a professional development driver. I hope your journey is an important and rewarding one. And now I'll turn it back over to Micki.

Micki: Thank you, Pat. That was great. Really great ideas and things for people to think about. Pat, thank you so much for taking the time to share your expertise on this topic that I think all of us, from those in higher ed, those preparing and doing training, teachers who are receiving training, all need to think really carefully about what are the outcomes we want, and then the who, what, where, when, how kind of idea. So I look forward to hearing you all or seeing you all joining us, I guess, because I won't see you or hear you since you're all muted, on the May 18th webinar with -- which will be our last one for NCQTL for this funding cycle. So remember May 18<sup>th</sup> at 1:00 Eastern time. Thanks so much, Pat. Have a great day, everybody.

Pat: Thanks, Micki. Okay, have a good day, everybody. Bye.

Micki: Bye.